INDIAN AND COLONIAL ADDENDUM

TO THE

BRITISH PHARMACOPŒIA

1898

PUBLISHED UNDER THE DIRECTION OF

THE GENERAL COUNCIL OF
MEDICAL EDUCATION AND REGISTRATION
OF THE UNITED KINGDOM

PURSUANT TO THE ACTS
XXI & XXII VICTORIA CAP. XC (1858)
AND XXV & XXVI VICTORIA CAP. XCI (1862)

1900

Printed and published for the Medical Council
BY
SPOTTISWOODE & CO. LTD., GRACECHURCH STREET, LONDON, ENGLAND

1900

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OF
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NOTICE.

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PREFACE

In consequence of communications addressed to the General Medical Council by Her Majesty's Secretary of State for India, the Council on 26 May 1893 adopted a resolution authorising its Pharmacopœia Committee 'to enter into correspondence, through the Privy Council, with the India Office and the Colonial Office, with a view to ascertaining in what degree, if any, the *British Pharmacopœia* can be better fitted than at present to meet Indian and Colonial requirements as regards important natural drugs and pharmaceutical preparations.' In the Preface to the *British Pharmacopœia* 1898 it was stated that formal communications with the proper authorities had accordingly been opened; that, in response to the Council's invitation, many suggestions had been received from medical and pharmaceutical bodies in India and the Colonies; and that a large proportion of these suggestions had been incorporated in the text of the work. A small number of alternative substances or preparations, the official recognition of which had been desired for local use, were sanctioned by their introduction into Appendix XI.

The foregoing steps were taken in pursuance of a design which had long been under the consideration of the Council, and were regarded as preparatory to the ultimate production of a complete Imperial Pharmacopœia. A further step is now taken by the publication of the present Addendum, in which medicinal plants and other substances suggested for inclusion by Indian and Colonial authorities are dealt with more fully than was possible in 1898. With regard to the sources, preparations, and properties of some of these drugs, further investigation, especially in the countries in which they are found, is much to be desired; and it is hoped that their official recognition will conduce to research of this kind. The Addendum is thus to a certain extent provisional; it is supplementary to the *British Pharmacopœia* 1898: but it is also to be regarded as preliminary to the next Pharmacopœia, with which its contents, subject to such improvements as increased knowledge and experience may indicate, will probably be incorporated.

It is intended by the Medical Council that the drugs and preparations included in the Addendum shall be prescribed by the medical practitioner according to his own judgment of their value. It is not intended that they shall be substituted by the dispenser or pharmacist for more or less similar articles already included in the Pharmacopœia, except in those cases only where authority for such substitution is expressly given in the text. Each article has accordingly been described under a distinctive name, and the divisions of the Empire within which it now acquires official sanction are indicated at the foot of the description.

Wherever in the Addendum medicinal substances, official preparations, pharmaceutical processes, or ana-

lytical tests are referred to without special definition, those of the *British Pharmacopœia* 1898 are to be understood ; and the general directions and explanations given in the Preface and Appendices of the latter are to be taken as applicable to the contents of the Addendum also.

The Medical Council has received expressions of concurrence in its endeavour to adapt the Pharmacopœia to the requirements of the Empire at large from each of the seventy Administrations of Her Majesty's dominions. A considerable number of the authorities consulted have intimated that the changes embodied in the Pharmacopœia of 1898 suffice to meet present local needs ; others have furnished detailed recommendations regarding new drugs and preparations required for local use, and to these effect has been given in the present Addendum ; and others again have made proposals, relating to preparations suitable for general use, which will receive careful consideration during the next revision of the Pharmacopœia.

For the assistance thus afforded, and for valued co-operation in other directions, the Medical Council records its indebtedness to Her Majesty's Privy Council, the India Office, and the Colonial Office, to the various administrative bodies of India and the Colonies, and to a number of medical and pharmaceutical authorities, collective and individual, throughout the Empire. To Mr W. Kirkby, of Manchester, special acknowledgments are due for his services as a Referee on questions of pharmaceutical botany.

The Adenddum, like the *British Pharmacopœia*

1898, has been edited by Dr John Attfield, F.R.S., who has devoted much labour to the collection and compilation of its contents.

The general supervision of the work has been entrusted by the Council to the following Committee, with Dr Nestor Tirard as Secretary:

Dr MacALISTER, *Chairman.*

Dr Atthill.	Dr Payne.
Sir Dyce Duckworth.	Mr Tichborne.
Dr McVail.	Sir John Batty Tuke.

The lamented death of Dr Leech on 2 July 1900 deprived the Committee of his valuable services as Chairman, when the Addendum, in which he took a deep interest, was approaching completion. Mr Brudenell Carter, who had long been a member of the Committee retired in May 1900, when its preparation was well advanced.

Office of the General Medical Council,
299 Oxford Street, London, England.
30 *November* 1900.

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OF THE INDIAN AND COLONIAL ADDENDUM TO THE BRITISH PHARMACOPŒIA 1898.

1900

App. = Appendix. *Syn.* = Synonym.

DIVISIONS OF THE EMPIRE REFERRED TO IN THE ADDENDUM.

(*Under 'Colonies' are included certain Provinces, Protectorates, etc.*)

India.—Ajmer-Merwara, The Andamans, Assam, Bengal, Berar, Bombay, British Baluchistan, Burma, The Central Provinces, Coorg, Madras, The North-west Provinces and Oudh, the Punjab, Sind.

African Colonies.—Basutoland, Bechuanaland Protectorate, Cape of Good Hope or Cape Colony, Gambia, Gold Coast, Lagos, Natal, Saint Helena, Sierra Leone.

⁂ The Orange River Colony and the Transvaal, as well as Northern Nigeria and Southern Nigeria, have been added since the arrangements for the Addendum were completed.

Australasian Colonies.—New South Wales, Queensland, South Australia, Tasmania, Victoria, Western Australia: forming the Commonwealth of Australia. British New Guinea, Fiji Islands, New Zealand, Western Pacific.

Eastern Colonies.—Ceylon, Hong Kong, Labuan, Mauritius, Seychelles Islands, Straits Settlements.

Mediterranean Colonies.—Cyprus, Gibraltar, Malta.

North American Colonies.—British Columbia, Manitoba, New Brunswick, North-west Territories, Nova Scotia, Ontario, Prince Edward Island, Quebec: forming the Dominion of Canada. Newfoundland.

West Indian Colonies.—Bahama Islands, Barbados, Bermuda Islands, British Guiana, British Honduras, Jamaica and Turks and Caicos Islands, Leeward Islands (Antigua, Dominica, Montserrat, Saint Christopher and Nevis, Virgin Islands), Trinidad and Tobago, Windward Islands (Grenada, Saint Lucia, Saint Vincent).

The Falkland Islands in the South Atlantic.

INDIAN AND COLONIAL ADDENDUM

TO THE

BRITISH PHARMACOPŒIA 1898

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ACACIÆ CORTEX.

Acacia Bark.

The dried bark of Acacia arabica, *Willd.* [*Roxb.*, *Cor. Pl.* plate 149 ; *Bedd.*, *Fl. Sylv.* plate 47], also the dried bark of Acacia decurrens, *Willd.* [*Bot. Reg.* vol. v. plate 371], the Sydney Black Wattle, or of the Victorian and Tasmanian Black Wattle ; obtained from wild or cultivated trees not less than seven years old, and when dried to be kept for one year before use.

Characters.—The bark of Acacia arabica is hard and woody, of a rusty-brown colour, and having a tendency to divide into several layers. The external surface of the older pieces is covered with a thick blackish periderm which is rugged and fissured longitudinally and transversely, the internal surface is red, longitudinally striate and fibrous ; taste astringent and mucilaginous. The bark of Acacia decurrens usually occurs in pieces of from one to two inches (two and a half to five centimetres) broad, somewhat twisted and incurved, varying in thickness from one-sixteenth to one-eighth of an inch (one and a half to three millimetres), external surface greyish-brown but darkening with age, often with ashy-grey blotches, with irregular longitudinal ridges and sometimes with transverse cracks, inner surface cinnamon-colour to ruddy, smooth, longitudinally striate; fracture brittle, irregular, coarsely fibrous, and light coloured when fresh; odour faintly tan-like; taste astringent.

INDIA. AUSTRALASIAN COLONIES. EASTERN COLONIES.

ACALYPHA.

Acalypha.

The fresh and the dried herb, Acalypha indica, *Linn.* [*Wight*, *Icones*, plate 877].

Characters.—An annual stem, erect, from one to two feet (three to six decimetres) high, with ovate-cordate leaves, serrated and on longish petioles. The spikes are axillary, as long as the leaves. The male flowers are uppermost, enclosed in a funnel-shaped involucre opening on the inner side and serrated. Stamens eight to sixteen; styles three; capsules tricoccous, three-celled, one-seeded: flowers small, green.

INDIA. EASTERN COLONIES.

ACETUM MYLABRIDIS.

Vinegar of Mylabris.

	IMPERIAL	METRIC
Mylabris, bruised . . .	2 ounces .	100 grammes
Glacial Acetic Acid and Distilled Water	mixed in equal volumes, a sufficient quantity	

Macerate the Mylabris in eighteen fluid ounces (or nine hundred cubic centimetres) of the mixture of Glacial Acetic Acid and Distilled Water for twenty-four hours; transfer to a percolator; when the liquid ceases to pass, pour enough of the menstruum in successive portions over the contents of the percolator to produce one pint (or one thousand cubic centimetres) of the Vinegar of Mylabris.

INDIA. AFRICAN COLONIES. EASTERN COLONIES.

ACETUM URGINEÆ.

Vinegar of Urginea.

	IMPERIAL	METRIC
Urginea, bruised	2½ ounces	125 grammes
Diluted Acetic Acid	1 pint	1000 cubic centimetres or a sufficient quantity

Exhaust the Urginea by the process of maceration as directed for Tinctures. The resulting Vinegar of Urginea should measure one pint (or one thousand cubic centimetres).

Dose.—10 to 30 minims.

India. Eastern Colonies.

ADHATODA.

Adhatoda.

The fresh and the dried leaves of Adhatoda Vasica, *Nees* (Justicia Adhatoda, *Linn.*) [*Bot. Mag.* plate 861].

Characters.—The fresh leaves are five or six inches (about twelve and a half to fifteen centimetres) long and an inch and a half (nearly four centimetres) broad, lanceolate, entire, taper-pointed, smooth on both sides. The dried leaves are of a somewhat dark green colour which becomes much lighter when the leaves are powdered. They have a strong characteristic tea-like odour, and a bitter taste.

India. Eastern Colonies.

AGROPYRUM.

Couch Grass.

Synonym.—Triticum.

The dried rhizome of Agropyrum repens, *Beauvois* (Triticum repens, *Linn.*) [*Berg and Schmidt, Off. Pflanzen,* plate 139].

Characters.—Rhizome pale yellow, rigid, from one-twelfth to one-tenth of an inch (two to two and a half millimetres) in diameter, usually in sections from one-eighth to one quarter of an inch (three to six millimetres) long. Strongly furrowed longitudinally, hollow except at the nodes. Couch Grass should be free from the remains of leaves and rootlets. It has no odour; it has a faint sweetish taste.

Australasian Colonies. Eastern Colonies. North American Colonies.

ALSTONIA.

Alstonia.

The dried bark of Alstonia scholaris, *R. Brown* [*Bentl. and Trim.*, *Med. Pl.* vol. iii. plate 173], and of Alstonia constricta, *F. v. M.*

Characters.—The bark of Alstonia scholaris is usually in irregular fragments one-eighth to half an inch (three to twelve millimetres) thick, of a somewhat spongy texture and a short coarse fracture; the external layer is unevenly rough and fissured and of a brownish-grey colour with occasional blackish spots, the internal layer bright buff. A transverse section shows the inner layer to be finely marked with numerous small medullary rays. Almost without odour. When chewed it develops a bitter taste. The bark of Alstonia constricta is usually in curved pieces or quills which may have a width of two and a half inches (sixty-four millimetres) or more, and half an inch (twelve millimetres) in thickness. It is covered with a thick periderm varying from one-tenth of an inch to a quarter of an inch (two and a half to six millimetres) in thickness; of a rusty-brown colour, strongly rugose, and marked with large deeply fissured reticulations: it sometimes bears small white foliaceous lichens. Internally the bark is of a cinnamon-brown colour and is marked with strong coarse longitudinal striæ. On transverse section the bark exhibits the dark brown periderm covering the inner orange-brown tissues, in which may be observed, with a lens, numerous small shining particles. The fracture is short and granular

in the outer layers, but fibrous in the liber portion. It has a faint aromatic odour and a very bitter taste.

INDIA. AUSTRALASIAN COLONIES. EASTERN COLONIES.

ANDROGRAPHIS.

Andrographis.

The dried plant, Andrographis paniculata, *Nees* [*Bentl. and Trim.*, *Med. Pl.* vol. iii. plate 197].

Characters.—Stem one to three feet (three decimetres to one metre) high, obtusely quadrangular and, in the upper portion, slightly winged, longitudinally furrowed, smooth, and of a dark green colour. Leaves opposite, shortly petiolate, lanceolate, entire; the upper surface is dark green and shining, the lower surface somewhat paler and finely granular. The leaves vary in size, the larger ones attaining a length of three inches (seven and a half centimetres), and a width of about one inch (twenty-five millimetres); they are thin and brittle. Calyx small, hairy, deeply five-cleft. Capsules somewhat cylindrical, tapering towards the ends, about five-eighths of an inch (fifteen millimetres) long, and one-eighth of an inch (three millimetres) wide, two-valved, with a deep furrow passing longitudinally down the face of each valve. Root simple, fusiform, and woody. The dried plant is without odour; its taste is intensely bitter.

INDIA. EASTERN COLONIES.

ARISTOLOCHIA.

Aristolochia.

The dried stem and root of Aristolochia indica, *Linn.* [*Wight*, *Icones*, plate 1858]

Characters.—The stem attains a diameter of about five-eighths of an inch (fifteen millimetres); it is usually in more or less cylindrical pieces, marked with the projecting scars of leaves and branches, covered with a greyish-yellow bark, having shallow longitudinal furrows and reticulations in the younger pieces, and a rather warty appearance with a few transverse fissures and longitudinal furrows in the older pieces. On transverse section it exhibits a somewhat thick bark, enclosing a woody cylinder composed of well-defined wedge-shaped portions of xylem containing large vessels, separated from each other by evident medullary rays, which are usually fissured radially. The root is undulated, of a dark orange-brown colour, and bears well-marked transverse constrictions; the bark is easily separable from the wood, and it is often removed in some places displaying the subjacent twisted woody bundles. The odour is spicy and camphoraceous, and the taste bitter and camphoraceous.

India. Eastern Colonies.

ARNICÆ FLORES.

Arnica Flowers.

The dried flower-heads of Arnica montana, *Linn.* [*Bentl. and Trim., Med. Pl.* vol. iii. plate 158].

Characters.—The flower-heads, when fresh, are from two to two and a quarter inches (five to six centimetres) broad, depressed-roundish; they consist of a scaly involucre in two rows, and a small, nearly flat, hairy receptacle, bearing from sixteen to twenty yellow, strap-shaped, three-toothed, ten-nerved ray-florets, and numerous yellow, five-toothed, tubular disk-florets. The achenes are slender, spindle-shaped, and crowned by a hairy pappus. Odour feeble, aromatic; taste bitter and acrid.

North American Colonies.

AURANTII CORTEX INDICUS.

Indian Orange Peel.

The fresh and the dried outer part of the pericarp of varieties of Citrus Aurantium grown in India and Ceylon.

Characters.—Indian Orange Peel should possess the pleasant odour and aromatic bitter taste characteristic of Bitter-Orange Peel (British Pharmacopœia 1898, pages 49

and 50) derived from Citrus Aurantium, var. Bigaradia, *Hook. f.* On its inner surface there should only be a very small amount of the white spongy portion of the pericarp.

In the under-mentioned divisions of the Empire, Indian Orange Peel, fresh or dried, may be employed in making the official preparations for which Fresh or Dried Bitter-Orange Peel is directed to be used.

INDIA. EASTERN COLONIES.

AZADIRACHTA INDICA.

Indian Azadirach.

Synonyms.—**Neem Bark, Margosa Bark.**

The dried bark of the stem of Melia Azadirachta, *Linn.* [*Bentl. and Trim., Med. Pl.* vol. i. plate 62].

Characters.—Externally of a rusty-grey colour, internally yellowish, and much foliated; coarsely fibrous; inodorous, bitter and slightly astringent; structure and thickness varying according to age.

INDIA. EASTERN COLONIES.

BELÆ FRUCTUS.

Bael Fruit.

The fresh half-ripe fruit of Ægle Marmelos, *Correa* [*Bentl. and Trim., Med. Pl.* vol. i. plate 55].

Characters.—Fruit about three inches (seven or eight centimetres) in diameter, globular, ovoid, or pyriform, with a firm woody nearly smooth rind. The fruit has ten to fifteen cells, each cell containing several compressed woolly seeds. Rind about one-eighth of an inch (three millimetres) thick, firm, and covered with a nearly smooth pale brown or greyish firmly adherent epicarp. The pulp is juicy, becoming hard and brittle on drying and acquiring an orange-brown or cherry-red colour externally; it has a faint aromatic odour, and its taste is mucilaginous, slightly acid, and faintly astringent.

INDIA. EASTERN COLONIES.

BERBERIS.

Berberis.

The dried stem of Berberis aristata, *DC.* [*Bentl. and Trim., Med. Pl.* vol. i. plate 16].

Characters.—In undulating pieces from one to two inches (two and a half to five centimetres) in diameter; covered with an orange-brown periderm which in some places is removed, displaying the subjacent darker brown tissues of the cortex; marked with slightly wavy longitudinal striæ and occasional shallow transverse depressions. The transverse section shows an outer narrow brown periderm surrounding a broad dark brown liber traversed by somewhat lighter medullary rays; the woody cylinder is composed of numerous narrow vascular rays, containing numerous vessels, separated by narrow paler coloured medullary rays. The wood is of a bright yellow colour; the portion in contiguity with the liber is somewhat lighter than the other portions. It has a faint odour and a bitter taste.

INDIA. EASTERN COLONIES.

BETEL.

Betel.

The leaves of Piper Betle, *Linn.* [*Wight, Icones,* plate 2926].

Characters.—The leaves are broadly ovate, acuminate, obliquely cordate at the base, five- or seven-nerved; coriaceous, and glossy on the upper surface; they have a warm aromatic bitter taste. As found in commerce they are frequently tied up or stitched together into packets.

INDIA. EASTERN COLONIES.

BUTEÆ GUMMI.

Butea Gum.

Synonym.—Bengal Kino.

The inspissated juice obtained from incisions in the stem of Butea frondosa, *Roxb.* [*Bentl. and Trim., Med. Pl.* vol. ii. plate 79].

Characters.—In small irregular shining fragments of a very dark ruby colour, the thinnest flakes being transparent when examined by transmitted light. Partially soluble in *water*; in hot *alcohol* (90 per cent.) about 40 per cent. of the Gum is soluble, the solution being scarcely coloured. It has no odour; its taste is astringent. It should be free from admixture of corky or woody particles. On keeping, the fragments are liable to become dull and blackish in colour.

In the under-mentioned divisions of the Empire, Butea Gum may be employed in making the official preparations for which Kino (distinguished in commerce as East Indian, Malabar, or Madras Kino) is directed to be used.

India. Eastern Colonies.

BUTEÆ SEMINA.

Butea Seeds.

The seeds of Butea frondosa, *Roxb.* [*Bentl. and Trim., Med. Pl.* vol. ii. plate 79].

Characters.—The Seeds are flat and reniform, from one to one and a half inches (twenty-five to thirty-eight millimetres) long, from three-quarters of an inch to one inch (sixteen to twenty-five millimetres) wide, and from one-sixteenth to one-twelfth of an inch (one and a half to two millimetres) thick. The testa is thin, glossy, veined, wrinkled, and of a dark reddish-brown colour. There is a large prominent hilum situated in the middle of the concave edge. The cotyledons are large, leafy, and of a yellow colour. Butea Seeds have a faint odour, and a slightly acrid taste.

India. Eastern Colonies.

CALOTROPIS.

Calotropis.

Synonym.—Mudar.

The dried root-bark of Calotropis procera, *R. Brown* [*Bentl. and Trim., Med. Pl.* vol. iii. plate 176], and of Calotropis gigantea, *R. Brown* [*Wight, Illustr.* plate 155], freed from the outer corky layer.

Characters.—The root-bark occurs in short more or less quilled pieces having a thickness of from one-tenth to one-fifth of an inch (two to five millimetres) and a width of not more than one and a half inches (thirty-seven millimetres). It is covered with a soft, greyish-buff, strongly furrowed and reticulated periderm, having a thickness of from one-twenty-fifth to one-twelfth of an inch (one to two millimetres), and being easily separable from the subjacent yellowish-white tissues. This layer must be removed before the root-bark is powdered for use. The inner liber portion exhibits, on transverse section, narrow pale brown indistinct phloem rays. The inner surface of the bark is somewhat granular and of a pale brown colour. It has a short mealy fracture, a faint odour, and a mucilaginous bitter acrid taste.

Dose, in powder.—3 to 10 grains, as a tonic; as an emetic, 30 to 60 grains.

INDIA. EASTERN COLONIES.

CAMBOGIA INDICA.

Indian Gamboge.

The gum-resin obtained from Garcinia Morella, *Desrouss.* [*Wight, Icones*, plate 102].

Characters and Tests.—Indian Gamboge must have all the important characters, and must respond to the tests, of Gamboge as described on page 64 of the British Pharmacopœia 1898. It must be free from particles of wood, leaves, and similar extraneous matters.

Dose.—½ to 2 grains.

INDIA. EASTERN COLONIES.

CATECHU NIGRUM.

Black Catechu.

An extract prepared from the wood of Acacia Catechu, *Willd.* [*Bentl. and Trim., Med. Pl.* vol. ii. plate 95].

Characters and Tests.—In irregular masses of a dark

brown colour, brittle, having a porous, glossy, somewhat conchoidal fracture. Partially soluble in cold *water*, almost entirely soluble in boiling *water*. Not less than 80 per cent. should be soluble in *alcohol* (90 per cent.). Its dilute aqueous solution gives a dark green colour with *test solution of ferric chloride*, changing to purple when made slightly alkaline with *solution of sodium hydroxide*. It is without odour; it has a sweetish, astringent taste. When incinerated it should not leave more than 6 per cent. of ash.

Dose.—5 to 15 grains.

In the under-mentioned divisions of the Empire, Black Catechu may be employed in making the official preparations for which Catechu is directed to be used. The difference in the colour of the drugs may give rise to a corresponding difference in the colour of the preparations.

INDIA. EASTERN COLONIES. NORTH AMERICAN COLONIES.

CISSAMPELOS.

Cissampelos.

The dried root of Cissampelos Pareira, *Linn.* [*Bentl. and Trim., Med. Pl.* vol. i. plate 15].

Characters.—Usually in slightly compressed undulating pieces, having a diameter of about half an inch (twelve millimetres). It is covered with a dark brown bark, easily separable from the subjacent fibrous wood, marked with broad shallow longitudinal furrows and fine transverse cracks. A transverse section exhibits a narrow bark surrounding a yellowish-brown woody column consisting of a single ring of from ten to twenty radial woody wedges separated from each other by distinct narrow medullary rays; the vessels of the xylem are large and may be seen with the naked eye. The fracture is fibrous. The root has no odour; it has a very bitter taste.

INDIA. EASTERN COLONIES.

COSCINIUM.

Coscinium.

The dried stem of Coscinium fenestratum, *Colebr.* [*Bot. Mag.* plate 6458].

Characters.—In woody cylindrical straight or twisted pieces of variable length, which may have a diameter of four inches (one decimetre); furrowed longitudinally and bearing occasional transverse narrow fissures. It is covered with a pale yellowish-grey cork, which is removed in many places and displays the subjacent brown cortical tissues. On transverse section it exhibits a cortex which varies considerably in thickness according to the age of the stem; this contains in the inner portion numerous semilunar masses of phloem; the wood consists of a single ring of wedge-shaped bundles containing many large vessels and surrounding a small central pith. There are many well-marked expanding medullary rays, of a somewhat lighter colour than the woody wedges. The wood breaks with a splintery fracture. The stem has no odour; it has a bitter taste.

INDIA. EASTERN COLONIES.

CUCURBITÆ SEMINA PRÆPARATA.

Melon Pumpkin Seeds.

The prepared fresh ripe seeds of cultivated plants of Cucurbita maxima, *Duch.* (Cucurbita Pepo, *Linn.*) [*Bentl. and Trim., Med. Pl.* vol. ii. plate 116].

Characters.—The prepared Seeds are flat, ovate, white, and exalbuminous, consisting of two fleshy easily separable cotyledons which have been freshly deprived of the yellowish membranous envelope or testa, and of the inner thin brownish coat or tegmen. They have a faint odour and a very slight taste. Before preparation, the seeds measure from one-third to three-quarters of an inch (or eight millimetres to two centimetres) in length, and from three-eighths to half an inch (nine to twelve millimetres) in breadth.

Dose.—3 to 4 ounces, bruised with a little water or milk to a creamy consistence.

Melon Pumpkin Seeds must not be more than one month old.

MEDITERRANEAN COLONIES.

DATURÆ FOLIA.

Datura Leaves.

The dried leaves of Datura fastuosa, *Linn.*, var. alba, *Nees* [*Wight, Icones*, plate 1396], and of Datura Metel, *Linn.* [*Bot. Mag.* plate 1440].

Characters.—The Leaves are ovate, acuminate, with long petioles and sinuate-dentate margins; often unequal at the base. The larger are seven or eight inches (seventeen or twenty centimetres) in length, and four or five inches (ten or twelve and a half centimetres) in breadth. They have a characteristic odour and a bitter taste.

INDIA. EASTERN COLONIES. WEST INDIAN COLONIES.

DATURÆ SEMINA.

Datura Seeds.

The dried seeds of Datura fastuosa, *Linn.*, var. alba, *Nees* [*Wight, Icones*, plate 1396].

Characters.—The Seeds are somewhat wedge-shaped, with rounded, thickened, furrowed, wavy margins, strongly compressed laterally; from one-sixth of an inch to one-fifth of an inch (four to five millimetres) broad, and about one-twenty-fifth of an inch (one millimetre) thick. The hilum is situated on one edge and extends from about the middle to the acute end of the seed. The testa is finely pitted and reticulated, and is of a dull yellowish-brown colour; it is comparatively thick, and encloses a narrow translucent endosperm which surrounds a curved embryo. Datura Seeds are without odour; they have a somewhat bitter taste.

INDIA. EASTERN COLONIES.

DECOCTUM ACACIÆ CORTICIS.

Decoction of Acacia Bark.

	IMPERIAL	METRIC
Acacia Bark, bruised .	1¼ ounces . .	62·5 grammes
Distilled Water . . .	a sufficient quantity	

Boil the Acacia Bark with twenty-four fluid ounces (or twelve hundred cubic centimetres) of Distilled Water, in a suitable vessel, for ten minutes; strain; if necessary pour more Distilled Water over the contents of the strainer, so as to produce one pint (or one thousand cubic centimetres) of the strained Decoction.

Dose.—½ to 2 fluid ounces.

India. Australasian Colonies. Eastern Colonies.

DECOCTUM AGROPYRI.

Decoction of Couch Grass.

Synonym.—Decoction of Triticum.

	IMPERIAL	METRIC
Couch Grass, cut small .	1 ounce .	50 grammes
Distilled Water . . .	a sufficient quantity	

Boil the Couch Grass with twenty-four fluid ounces (or twelve hundred cubic centimetres) of Distilled Water, in a suitable vessel, for ten minutes; strain; if necessary pour more Distilled Water over the contents of the strainer, so as to produce one pint (or one thousand cubic centimetres) of the strained Decoction.

Dose.—½ to 2 fluid ounces.

Australasian Colonies. Eastern Colonies. North American Colonies.

DECOCTUM CISSAMPELI.

Decoction of Cissampelos.

	IMPERIAL	METRIC
Cissampelos, thinly sliced .	2½ ounces .	125 grammes
Distilled Water	a sufficient quantity.	

Boil the Cissampelos with twenty-four fluid ounces (or

twelve hundred cubic centimetres) of Distilled Water, in a suitable vessel, for fifteen minutes ; strain ; if necessary pour more Distilled Water over the contents of the strainer, so as to produce one pint (or one thousand cubic centimetres) of the strained Decoction.

Dose.—½ to 2 fluid ounces.

India. Eastern Colonies.

DECOCTUM GOSSYPII RADICIS CORTICIS.

Decoction of Cotton Root Bark.

	IMPERIAL	METRIC
Cotton Root Bark, bruised .	4 ounces .	200 grammes
Distilled Water	a sufficient quantity	

Boil the Cotton Root Bark with two pints (or two litres) of the Distilled Water, in a suitable vessel, until the volume is reduced to one pint (or one thousand cubic centimetres); strain; if necessary pour more Distilled Water over the contents of the strainer, so as to produce one pint (or one thousand cubic centimetres) of the strained Decoction.

Dose.—½ to 2 fluid ounces.

India. Eastern Colonies. North American Colonies. West Indian Colonies.

DECOCTUM HYGROPHILÆ.

Decoction of Hygrophila.

	IMPERIAL	METRIC
Hygrophila, cut small . .	2 ounces .	100 grammes
Distilled Water	a sufficient quantity	

Boil the Hygrophila with three pints (or three thousand cubic centimetres) of the Distilled Water, in a suitable vessel, until the volume is reduced to one pint (or one thousand cubic centimetres); strain ; if necessary pour more Distilled Water over the contents of the strainer, so as to produce one pint (or one thousand cubic centimetres) of the strained Decoction.

Dose.—½ to 2 fluid ounces.

India. Eastern Colonies.

DECOCTUM ISPAGHULÆ.

Decoction of Ispaghula.

	IMPERIAL	METRIC
Ispaghula, bruised . .	120 grains .	13·7 grammes
Distilled Water . . .	a sufficient quantity	

Boil the Ispaghula with twenty-four fluid ounces (or twelve hundred cubic centimetres) of Distilled Water, in a suitable vessel, for ten minutes; strain; if necessary pour more Distilled Water over the contents of the strainer, so as to produce one pint (or one thousand cubic centimetres) of the strained Decoction.

Dose.—½ to 2 fluid ounces.

India. Eastern Colonies.

DECOCTUM SAPPAN.

Decoction of Sappan.

	IMPERIAL	METRIC
Sappan, in chips . .	1 ounce . .	50 grammes
Cinnamon Bark, bruised .	70 grains . .	8 grammes
Distilled Water .	a sufficient quantity	

Boil the Sappan with twenty-four fluid ounces (or twelve hundred cubic centimetres) of Distilled Water, in a suitable vessel, for ten minutes, adding the Cinnamon Bark towards the end of the time; strain; if necessary pour more Distilled Water over the contents of the strainer, so as to produce one pint (or one thousand cubic centimetres) of the strained Decoction.

Dose.—½ to 2 fluid ounces.

India. Eastern Colonies.

EMBELIA.

Embelia.

The fruit of Embelia Ribes, *Burmann* [*Burm., Flor. Indic.* plate 23], and of Embelia robusta, *Roxb.* [*Beddome, Flor. Sylvatic.* plate 19].

Characters.—The dried fruit of these plants is globular, superior, about one-sixth of an inch (four millimetres) in diameter; varies in colour from a dull red with dark spots to nearly black, warty or striated longitudinally; is often attached to a five-partite calyx with a slender pedicel; and is surmounted by a minute beak. It contains a horny seed surrounded by a delicate membrane and covered with a fine efflorescence. The seed is of a reddish colour marked with spots of a much lighter hue, which, although they cannot be obliterated by rubbing, disappear when soaked in water for some time; it has a depression at the base and contains a slightly ruminated endosperm enclosing a linear embryo. Taste slightly astringent and aromatic.

Dose, in powder.—1 to 4 drachms.

INDIA. EASTERN COLONIES.

EMPLASTRUM CALEFACIENS MYLABRIDIS.

Warming Plaster of Mylabris.

	IMPERIAL	METRIC
Mylabris, in coarse powder	4 ounces	100 grammes
Yellow Beeswax	4 ounces	100 grammes
Resin	4 ounces	100 grammes
Resin Plaster	3¼ pounds	1300 grammes
Soap Plaster	2 pounds	800 grammes
Distilled Water, boiling	1 pint	500 cubic centimetres

Infuse the Mylabris in the Distilled Water for six hours; squeeze strongly through calico; evaporate the expressed liquid on a water-bath till it is reduced to one third; add other ingredients; melt on a water-bath; stir until the ingredients are thoroughly mixed.

See Appendix I., p. 57 (EMPLASTRA).

INDIA. AFRICAN COLONIES. EASTERN COLONIES.

EMPLASTRUM MYLABRIDIS.

Mylabris Plaster.

	IMPERIAL	METRIC
Mylabris, in powder	3½ ounces	35 grammes
Yellow Beeswax	2 ounces	20 grammes
Lard	2 ounces	20 grammes
Resin	2 ounces	20 grammes
Soap Plaster	½ ounce	5 grammes

Melt the Resin; add the Soap Plaster, and, afterwards, the Yellow Beeswax and Lard. Sprinkle the Mylabris into the melted mixture; stir continuously while the product is cooling.

See Appendix I., p. 57 (ADEPS INDURATUS, EMPLASTRA).

INDIA. AFRICAN COLONIES. EASTERN COLONIES.

EXTRACTUM ACALYPHÆ LIQUIDUM.

Liquid Extract of Acalypha.

	IMPERIAL	METRIC
Acalypha, dried and in No. 40 powder	20 ounces	1000 grammes
Alcohol (90 per cent.)	a sufficient quantity	

Thoroughly moisten the Acalypha with the Alcohol; set aside in a closed vessel for forty-eight hours; transfer to a percolator; add more of the Alcohol slowly, until the Acalypha is exhausted. Reserve the first fifteen fluid ounces (or seven hundred and fifty cubic centimetres) of the percolate; remove the alcohol from the remainder by distillation; evaporate the residue to the consistence of a soft extract; dissolve this in the reserved portion; add enough of the Alcohol to produce one pint (or one thousand cubic centimetres) of the Liquid Extract.

Dose.—5 to 30 minims.

INDIA. EASTERN COLONIES.

EXTRACTUM ADHATODÆ LIQUIDUM.

Liquid Extract of Adhatoda.

	IMPERIAL	METRIC
Adhatoda, dried and in No. 40 powder	20 ounces	1000 grammes
Alcohol (60 per cent.)	a sufficient quantity	

Moisten the Adhatoda with about eight fluid ounces (or four hundred cubic centimetres) of the Alcohol; pack in a percolator, adding enough of the Alcohol to saturate it thoroughly; when the liquid begins to drop, close the lower orifice of the percolator; set aside for forty-eight hours; then allow percolation to proceed gradually, adding more of the Alcohol until the Adhatoda is exhausted. Reserve the first seventeen fluid ounces (or eight hundred and fifty cubic centimetres) of the percolate; remove the alcohol from the remainder by distillation; evaporate the residue to the consistence of a soft extract; dissolve this in the reserved portion; add enough of the Alcohol to produce one pint (or one thousand cubic centimetres) of the Liquid Extract.

Dose.—20 to 60 minims.

India. Eastern Colonies.

EXTRACTUM AGROPYRI LIQUIDUM.

Liquid Extract of Couch Grass.

Synonym.—Liquid Extract of Triticum.

	IMPERIAL	METRIC
Couch Grass, cut small	20 ounces	1000 grammes
Alcohol (90 per cent.) Distilled Water, boiling	of each a sufficient quantity	

Digest the Couch Grass with one hundred fluid ounces (or five litres) of the boiling Distilled Water for six hours; strain; repeat the operation twice; mix the three successive infusions and evaporate to fifteen fluid ounces (or seven hundred and fifty cubic centimetres); add five fluid ounces (or two hundred and fifty cubic centimetres) of the Alcohol; let the mixture stand for twenty-four hours; filter; to the filtrate add enough of the Alcohol to produce one pint (or one thousand cubic centimetres) of the Liquid Extract.

Dose.—1 to 2 fluid drachms.

See Appendix I., p. 57 (Extracta Liquida).

Australasian Colonies. Eastern Colonies. North American Colonies.

EXTRACTUM BELÆ LIQUIDUM.

Liquid Extract of Bael.

	IMPERIAL	METRIC
Bael Fruit, bruised .	. 20 ounces	. 1000 grammes
Distilled Water .	. 15 pints	. 15 litres
Alcohol (90 per cent.)	. a sufficient quantity	

Macerate the bruised Bael Fruit for twelve hours in five pints (or five litres) of the Distilled Water; pour off and reserve the clear liquor; repeat the maceration a second and third time for one hour, using for each maceration five pints (or five litres) of the Distilled Water; press the marc; and filter the mixed liquids through flannel. Evaporate to fifteen fluid ounces (or seven hundred and fifty cubic centimetres), and, when cold, add enough of the Alcohol to produce one pint (or one thousand cubic centimetres) of the Liquid Extract. Filter, or otherwise clarify, if necessary.

Dose.—1 to 2 fluid drachms.

See Appendix I., p. 57 (Extracta Liquida).

India. Eastern Colonies.

EXTRACTUM CISSAMPELI LIQUIDUM.

Liquid Extract of Cissampelos.

Add to Cissampelos, in No. 40 powder, rather more than an equal bulk of boiling Distilled Water and set aside for twenty-four hours; then pack in a percolator and pass boiling Distilled Water slowly through it until the percolate amounts to about ten times the weight of the Cissampelos or until the latter is exhausted. Ascertain the proportion of extractive matter in the percolate by evaporating a small weighed

quantity in a counterpoised dish on a water-bath to a firm consistence, and weighing the product. Then evaporate the bulk of the percolate until the residual liquid contains one-third of its weight of such extractive matter; mix with this residual liquid enough Alcohol (90 per cent.) to produce from three volumes of the evaporated liquid four volumes of the Liquid Extract. Filter, or otherwise clarify, if necessary.

Dose.—½ to 2 fluid drachms.

See Appendix I., p. 57 (Extracta Liquida).

India. Eastern Colonies.

EXTRACTUM GLYCYRRHIZÆ SPIRITUOSUM.

Spirituous Extract of Liquorice.

	IMPERIAL	METRIC
Extract of Liquorice . .	10 ounces .	500 grammes
Alcohol (90 per cent.). .	5 fl. ounces .	250 cubic centimetres
Distilled Water . . .	a sufficient quantity	

Mix the Extract of Liquorice with enough Distilled Water to form a liquid; add the Alcohol; then add enough Distilled Water to produce a well-mixed bulk of one pint (or one thousand cubic centimetres); filter if necessary.

Dose.—½ to 1 fluid drachm.

See Appendix I., p. 57 (Extracta Liquida).

India. Eastern Colonies.

EXTRACTUM GOSSYPII RADICIS CORTICIS LIQUIDUM.

Liquid Extract of Cotton Root Bark.

	IMPERIAL	METRIC
Cotton Root Bark, in No. 30 powder .	20 ounces	1000 grammes
Glycerin	5 fl. ounces .	250 cubic centimetres
Alcohol (90 per cent.) . .	a sufficient quantity	

Mix the Glycerin with fifteen fluid ounces (or seven hundred and fifty cubic centimetres) of the Alcohol; mix the powder with ten fluid ounces (or five hundred cubic centimetres) of this menstruum; pack firmly in a percolator; add more of the menstruum, and when the liquid begins to drop close the lower orifice of the percolator; set aside for forty-eight hours; then allow percolation to proceed, gradually adding the remainder of the menstruum and then more of the Alcohol until the Cotton Root Bark is exhausted. Reserve the first fourteen fluid ounces (or seven hundred cubic centimetres) of the percolate; remove the alcohol from the remainder by distillation; evaporate the residue to the consistence of a soft extract; dissolve this in the reserved percolate; add enough of the Alcohol to produce one pint (or one thousand cubic centimetres) of the Liquid Extract.

Dose.—½ to 1 fluid drachm.

INDIA. EASTERN COLONIES. NORTH AMERICAN COLONIES. WEST INDIAN COLONIES.

EXTRACTUM GRINDELIÆ LIQUIDUM.

Liquid Extract of Grindelia.

	IMPERIAL	METRIC
Grindelia, in No. 40 powder	20 ounces	1000 grammes
Sodium Bicarbonate	2 ounces	100 grammes
Distilled Water	10 fl. ounces	500 cubic centimetres
Alcohol (90 per cent.)	a sufficient quantity	

Moisten the Grindelia with eight fluid ounces (or four hundred cubic centimetres) of the Alcohol; macerate in a closed vessel for twenty-four hours; pack the moistened powder in a percolator, and add enough of the Alcohol to saturate it thoroughly; when the liquid begins to drop, close the lower orifice of the percolator; set aside for twenty-four hours, then allow percolation to proceed, gradually adding more of the Alcohol until the Grindelia is exhausted. Remove the alcohol by distillation, and dissolve the residue in the Distilled Water to which the Sodium Bicarbonate has previously been added, and after effervescence ceases add enough Distilled Water to produce fifteen fluid ounces (or seven hundred and fifty cubic centimetres), and then enough

of the Alcohol to produce one pint (or one thousand cubic centimetres) of the Liquid Extract.

Dose.—10 to 20 minims.

See Appendix I., p. 57 (Extracta Liquida).

Australasian Colonies. North American Colonies.

EXTRACTUM KAVÆ LIQUIDUM.

Liquid Extract of Kava.

	IMPERIAL	METRIC
Kava Rhizome, in No. 20 powder	20 ounces	1000 grammes
Alcohol (90 per cent.)	a sufficient quantity	
Alcohol (45 per cent.)	a sufficient quantity	

Mix the powdered Kava Rhizome with two pints (or two litres) of the Alcohol (90 per cent.); set aside in a closed vessel for forty-eight hours; transfer to a percolator and percolate slowly, reserving the first fifteen fluid ounces (or seven hundred and fifty cubic centimetres) of the percolate. Continue the percolation, adding the Alcohol (45 per cent.) until the powder is exhausted; then remove most of the alcohol from this percolate by distillation; evaporate the residue at a temperature below 176° F. (80° C.) to the consistence of a soft extract, and dissolve this in the reserved percolate; add enough Alcohol (90 per cent.) to produce one pint (or one thousand cubic centimetres) of the Liquid Extract.

Dose.—30 to 60 minims.

Australasian Colonies.

EXTRACTUM PICRORHIZÆ LIQUIDUM.

Liquid Extract of Picrorhiza.

	IMPERIAL	METRIC
Picrorhiza, in No. 60 powder	20 ounces	1000 grammes
Alcohol (60 per cent.)	a sufficient quantity	

Moisten the Picrorhiza with about eight fluid ounces (or four hundred cubic centimetres) of the Alcohol; pack the moistened powder in a percolator, and add enough of the

Alcohol to saturate it thoroughly; when the liquid begins to drop, close the lower orifice of the percolator; set aside for forty-eight hours; then allow percolation to proceed, gradually adding more of the Alcohol until the Picrorhiza is exhausted. Reserve the first seventeen fluid ounces (or eight hundred and fifty cubic centimetres) of the percolate; remove the alcohol from the remainder by distillation; evaporate the residue to the consistence of a soft extract; dissolve this in the reserved portion; add enough of the Alcohol to produce one pint (or one thousand cubic centimetres) of the Liquid Extract.

Dose.—20 to 60 minims.

INDIA. EASTERN COLONIES.

EXTRACTUM VIBURNI PRUNIFOLII LIQUIDUM.

Liquid Extract of Black Haw.

	IMPERIAL	METRIC
Black Haw, in No. 60 powder	20 ounces	1000 grammes
Alcohol (70 per cent.) . . .	a sufficient quantity	

Moisten the Black Haw with about eight fluid ounces (or four hundred cubic centimetres) of the Alcohol; pack the moistened powder in a percolator, and add enough of the Alcohol to saturate it thoroughly; when the liquid begins to drop, close the lower orifice of the percolator; set aside for forty-eight hours; then allow percolation to proceed, gradually adding more of the Alcohol until the powder is exhausted. Reserve the first seventeen fluid ounces (or eight hundred and fifty cubic centimetres) of the percolate; remove the alcohol from the remainder by distillation; evaporate the residue to the consistence of a soft extract; dissolve this in the reserved portion; add enough of the Alcohol to produce one pint (or one thousand cubic centimetres) of the Liquid Extract.

Dose.—1 to 2 fluid drachms.

INDIA. EASTERN COLONIES. NORTH AMERICAN COLONIES.

GOSSYPII RADICIS CORTEX.

Cotton Root Bark.

The dried root-bark of Gossypium herbaceum, *Linn.* [*Berg and Schmidt, Off. Pflanzen*, plate 106].

Characters.—In thin flexible bands or quilled pieces, covered with a thin periderm of a brownish-yellow colour and marked with fine longitudinal ridges and meshes; it is marked with small black dots or short transverse lines. Where the periderm has been removed it displays the subjacent orange-brown tissues. The inner surface is whitish, silky, and finely striate. The liber portion is readily separated into thin fibrous laminæ. It has a tough fibrous fracture. Inodorous, and with a slightly acrid astringent taste.

India. Eastern Colonies. North American Colonies. West Indian Colonies.

GRINDELIA.

Grindelia.

The dried leaves and flowering tops of Grindelia squarrosa, *Dunal* [*Bot. Mag.* plate 1706], and of Grindelia robusta, *Nuttall* [*United States Agricultural Report*, 1888, page 8].

Characters.—The leaves of Grindelia squarrosa are alternate, pale green, smooth, coriaceous, brittle, oblanceolate, or elongate-oblanceolate, the lower leaves tapering considerably below, but scarcely enlarged, and at the sessile base the involucral bracts are long with reflexed subulate points. The leaves of Grindelia robusta are similar in colour and texture, but are shorter, more oblong, and have a cordate amplexicaul base, are furnished with a few glandular hairs, and are sharply serrate at the margin. The involucre in both species is about half an inch (twelve millimetres) in diameter, and the tips of the bracts are beset with short many-celled glands. Both the involucre and the leaves are more or less covered with glossy patches of exuded resin. The odour is balsamic, and the taste pungently aromatic and bitter.

Australasian Colonies. North American Colonies.

GUMMI INDICUM.

Indian Gum.

A gummy exudation from the wood of Anogeissus latifolia, *Wall.* [*Beddome, Flora Sylvatica*, plate 15].

Characters and Tests.—In vermiform or rounded tears of varying size, pale amber or yellowish-white in colour, translucent, with a somewhat dull surface and breaking with a bright glassy fracture. It has a faint odour; taste insipid and mucilaginous. Entirely soluble in water, forming a viscid, adhesive mucilage. Insoluble in *alcohol* (90 per cent.). The aqueous solution is gelatinised by the addition of *alcohol* (90 per cent.), solution of *borax*, or *solution of lead subacetate*; but it is unaffected by the addition of *test-solution of ferric chloride* (distinction from Amrad and certain other gums) or of *solution of lead acetate*. It is not coloured blue or brown by a small quantity of *solution of iodine* (absence of starch or commercial 'dextrin'). On incineration Indian Gum should not yield more than 4 per cent. of ash.

In the under-mentioned divisions of the Empire, Indian Gum may be employed in making the official preparations for which Gum Acacia is directed to be used, one part of the former being taken for every two parts ordered of the latter (see 'Mucilago Gummi Indici').

INDIA. EASTERN COLONIES.

HIRUDO AUSTRALIS.

Australian Leeches.

Hirudo quinquestriata, *Schmarda* [*Neue wirbellose Thiere*, II., P. 2, plate xvi. fig. 140] (Hirudo australis, *Bosisto*; Limnobdella quinquestriata, *R. Blanch.*), the Five-striped or Australian Leech.

Characters.—Dorsal surface greenish-yellow-brown, with five longitudinal stripes. Ventral surface greenish-yellow, not spotted. Jaws large, with forty-eight to fifty teeth, the inner being the larger.

AUSTRALASIAN COLONIES.

HYGROPHILA.

Hygrophila.

The dried herb including the root of Hygrophila spinosa, *T. And.* (Asteracantha longifolia, *Nees*) [*Wight, Icones,* plate 449].

Characters.—Roots tapering, with numerous rootlets; stems quadrangular, sparingly branched, from two to four feet (six to twelve decimetres) high; branches and leaves opposite, the nodes slightly swollen. Leaves entire, six at each node: two outer, about four to five inches (ten to thirteen centimetres) long, and half an inch (twelve millimetres) broad; four inner, one and a half inches (four centimetres) long, linear-lanceolate and tapering to each end. In the axil of each leaf is a yellowish subulate spine about one inch (two and a half centimetres) long. The leaves as well as the stem are furnished with hispid spreading scattered three-celled to five-celled white hairs, which are more numerous near the nodes and on the bracts and young leaves. The flowers are usually of a bright purplish-blue colour, rarely white, in four pairs at each node; the bracts resemble the leaves in shape. The calyx has four sepals, one of which is broader than the others. The corolla is glabrous and two-lipped; it has didynamous stamens, and an oblong staminode on the lower lip. The ripened ovary contains four to eight seeds, which are brownish, small, one-tenth of an inch (between two and three millimetres) long and about half as much broad, flattened, unequal at the base, rounded at the apex, and with a projecting angle from base to apex on one surface. When moistened the seeds exude a tenacious mucilage; hence if placed in the mouth they adhere readily to the tongue. They are without odour and have scarcely any flavour.

India. Eastern Colonies.

INFUSUM ALSTONIÆ.

Infusion of Alstonia.

	IMPERIAL	METRIC
Alstonia, bruised	1 ounce	50 grammes
Distilled Water, boiling	1 pint	1000 cubic centimetres

Infuse for half an hour; strain.

Dose.—½ to 1 fluid ounce.

India. Australasian Colonies. Eastern Colonies.

INFUSUM ANDROGRAPHIDIS.

Infusion of Andrographis.

	IMPERIAL	METRIC
Andrographis, cut small	1 ounce	50 grammes
Distilled Water, boiling	1 pint	1000 cubic centimetres

Infuse in a covered vessel for fifteen minutes; strain.

Dose.—½ to 1 fluid ounce.

India. Eastern Colonies.

INFUSUM AZADIRACHTÆ INDICÆ.

Infusion of Indian Azadirach.

	IMPERIAL	METRIC
Indian Azadirach, finely rasped	88 grains	10 grammes
Distilled Water, cold	1 pint	1000 cubic centimetres

Infuse in a covered vessel for fifteen minutes; strain.

Dose.—½ to 1 fluid ounce.

India. Eastern Colonies.

INFUSUM COSCINII.

Infusion of Coscinium.

	IMPERIAL	METRIC
Coscinium, thinly sliced	1 ounce	50 grammes
Distilled Water, boiling	1 pint	1000 cubic centimetres

Infuse for half an hour; strain.

Dose.—½ to 1 fluid ounce.

INDIA. EASTERN COLONIES.

INFUSUM TINOSPORÆ.

Infusion of Tinospora.

	IMPERIAL	METRIC
Tinospora, thinly sliced	2 ounces	100 grammes
Distilled Water, cold	1 pint	1000 cubic centimetres

Infuse for half an hour; strain.

Dose.—½ to 1 fluid ounce.

INDIA. EASTERN COLONIES.

INFUSUM TODDALIÆ.

Infusion of Toddalia.

	IMPERIAL	METRIC
Toddalia, in No. 20 powder	2 ounces	100 grammes
Distilled Water, boiling	1 pint	1000 cubic centimetres

Infuse in a covered vessel for fifteen minutes; strain.

Dose.—1 to 2 fluid ounces.

INDIA. EASTERN COLONIES.

ISPAGHULA.

Ispaghula.

The dried seeds of Plantago ovata, *Forsk.* (Plantago Ispaghula, *Roxb.*) [*Bentl. and Trim., Med. Pl.* vol. iii. plate 211].

Characters.—The seeds are boat-shaped and somewhat acute at one end, from one-tenth to one-eighth of an inch (two to three millimetres) long and from one-twenty-fifth to one-sixteenth of an inch (one to one and a half millimetres) wide. They are pale pinkish-grey in colour, with a darker elongated spot on the convex side; the concave side contains the hilum covered with the remains of a thin white membrane. When placed in water the testa swells and produces a viscid mucilage. The seeds possess neither odour nor taste.

Dose, in powder.—50 to 150 grains.

India. Eastern Colonies.

KALADANA.

Kaladana.

Synonym.—Pharbitis Nil.

The dried seeds of Ipomœa hederacea, *Jacq.* [*Bentl. and Trim., Med. Pl.* vol. iii. plate 185].

Characters.—The seeds have the form of a segment of a sphere; they are generally about three-sixteenths of an inch (five millimetres) in length, and nearly as much in breadth, but sometimes much smaller. Their weight varies from one half to nearly one grain (three to six centigrammes). The colour of the testa is black, except at the hilum, where it is brown and somewhat hairy. Upon soaking the seeds in water the testa bursts and discloses the delicate albumen which envelops the folded cotyledons and radicle. The seeds have an acrid taste and an earthy odour.

Dose, in powder.—30 to 50 grains.

India. Eastern Colonies.

KALADANÆ RESINA.

Kaladana Resin.

Synonym.—Pharbitisin.

	IMPERIAL	METRIC
Kaladana, in No. 40 powder	8 ounces .	100 grammes
Alcohol (90 per cent.) Distilled Water .	of each a sufficient quantity	

Digest the Kaladana with twice its weight of the Alcohol in a covered vessel, heating gently, for twenty-four hours; transfer to a percolator; when the tincture ceases to pass, continue the percolation with successive portions of the Alcohol until the Kaladana is exhausted; add to the tincture thus produced four fluid ounces (or fifty cubic centimetres) of the Distilled Water; remove the alcohol by distillation; transfer the residue while hot to an open dish; allow it to become cold; pour off the supernatant liquid from the resin; wash this two or three times with hot Distilled Water; dry.

Characters and Test.—In brownish opaque fragments, translucent at the edges, brittle, breaking with a resinous fracture, readily reduced to a grey powder; sweetish, and acrid to the throat; somewhat disagreeable in odour especially when warmed; easily soluble in *alcohol* (90 per cent.), practically insoluble in *benzol*, *ether*, *chloroform*, or *carbon bisulphide.* It melts at about 320° F. (160° C.) The powdered Resin yields little or nothing to warm *water.*

Dose.—2 to 8 grains.

INDIA. EASTERN COLONIES.

KAVÆ RHIZOMA.

Kava Rhizome.

The decorticated, dried, and divided rhizome, without the roots, of Piper methysticum, *Forster* [*Pharm. Journ.* ser. i. vol. 3, p. 473].

Characters.—In whitish or light brownish-grey irregularly cuboid or roughly wedge-shaped fragments, from which the grey periderm has been sliced off; from half an inch to two inches (one and a quarter to five centimetres) thick.

Most of the fragments exhibit, when cut, a central portion of a close even texture, surrounded by a distinct ring of narrow radiating vascular bundles separated by relatively broad paler medullary rays. The Rhizome has a starchy fracture, a slight somewhat pleasant odour, and, when masticated, a piperaceous, faintly bitter, and slightly saponaceous taste. Pieces of a coarsely porous or very woody character should be excluded.

Australasian Colonies.

KINO EUCALYPTI.

Eucalyptus Kino.

Synonym.—Botany Bay Kino.

An exudation from the stem of various species of Eucalyptus, having the characters and responding to the tests given for Kino on p. 167 of the British Pharmacopœia 1898.

Dose, in powder.—5 to 20 grains.

In the under-mentioned divisions of the Empire, Eucalyptus Kino may be employed in making the official preparations for which Kino (distinguished in commerce as East Indian, Malabar, or Madras Kino) is directed to be used.

Australasian Colonies.

LIQUOR ANDROGRAPHIDIS CONCENTRATUS.

Concentrated Solution of Andrographis.

	IMPERIAL	METRIC
Andrographis, in No. 40 powder . . .	10 ounces	500 grammes
Alcohol (20 per cent.)	25 fl. ounces . or a sufficient quantity	1250 cubic centimetres

Add to the Andrographis five fluid ounces (or two hundred and fifty cubic centimetres) of the Alcohol; pack in a closed percolator; set aside for three days; percolate with more of the Alcohol, added in ten portions of two fluid ounces (or one hundred cubic centimetres) each, at intervals of twelve hours; continue the percolation, with more Alcohol if neces-

sary, until the resulting product measures one pint (or one thousand cubic centimetres).

Dose.—$\frac{1}{2}$ to 1 fluid drachm.

India. Eastern Colonies.

LIQUOR ARISTOLOCHIÆ CONCENTRATUS.

Concentrated Solution of Aristolochia.

	IMPERIAL	METRIC
Aristolochia, in No. 40 powder . .	. 10 ounces .	500 grammes
Alcohol (20 per cent.)	. 25 fl. ounces	1250 cubic centimetres
	or a sufficient quantity	

Add to the Aristolochia five fluid ounces (or two hundred and fifty cubic centimetres) of the Alcohol; pack in a closed percolator; set aside for three days; percolate with more of the Alcohol, added in ten portions of two fluid ounces (or one hundred cubic centimetres) each, at intervals of twelve hours; continue the percolation, with more Alcohol if necessary, until the resulting product measures one pint (or one thousand cubic centimetres).

Dose.—$\frac{1}{2}$ to 2 fluid drachms.

India. Eastern Colonies.

LIQUOR BERBERIDIS CONCENTRATUS.

Concentrated Solution of Berberis.

	IMPERIAL	METRIC
Berberis, in No. 40 powder . .	. 10 ounces	500 grammes
Alcohol (20 per cent.)	. 25 fl. ounces	1250 cubic centimetres
	or a sufficient quantity	

Add to the Berberis five fluid ounces (or two hundred and fifty cubic centimetres) of the Alcohol; pack in a closed percolator; set aside for three days; percolate with more of the Alcohol, added in ten portions of two fluid ounces (or one hundred cubic centimetres) each, at intervals of twelve hours; continue the percolation, with more Alcohol if necessary, until the resulting product measures one pint (or one thousand cubic centimetres).

Dose.—½ to 1 fluid drachm.

INDIA. EASTERN COLONIES.

LIQUOR COSCINII CONCENTRATUS.

Concentrated Solution of Coscinium.

	IMPERIAL	METRIC
Coscinium, in No. 5 powder	10 ounces	500 grammes
Alcohol (90 per cent.)	8 fl. ounces	400 cubic centimetres
Distilled Water	16 fl. ounces	800 cubic centimetres
	or a sufficient quantity	

Macerate the Coscinium for twenty-four hours with eight fluid ounces (or four hundred cubic centimetres) of Distilled Water; press strongly; again macerate the residue for twenty-four hours with eight fluid ounces (or four hundred cubic centimetres) of Distilled Water; press strongly. Mix the expressed liquids, and heat for five minutes to 180° F. (82·2° C.). To the resulting liquid, when cold, add the Alcohol; set aside; decant or filter, adding Distilled Water, if necessary, so as to produce one pint (or one thousand cubic centimetres) of the Concentrated Solution.

Dose.—½ to 1 fluid drachm.

The proportion of Distilled Water used in macerating may be varied according to the condition of the powder, provided that the Coscinium is fairly exhausted and that the final product has the required volume.

INDIA. EASTERN COLONIES.

LIQUOR EPISPASTICUS MYLABRIDIS.

Blistering Liquid of Mylabris.

	IMPERIAL	METRIC
Mylabris, in No. 20 powder	10 ounces	500 grammes
Acetic Ether	a sufficient quantity	

Mix the Mylabris with five fluid ounces (or two hundred

and fifty cubic centimetres) of Acetic Ether; pack in a percolator; at the expiration of twenty-four hours pour more Acetic Ether over the contents of the percolator; allow the solution to pass slowly through until one pint (or one thousand cubic centimetres) of the Liquid is obtained.

India. African Colonies. Eastern Colonies.

LIQUOR TINOSPORÆ CONCENTRATUS.

Concentrated Solution of Tinospora.

	IMPERIAL	METRIC
Tinospora, in No. 5 powder	10 ounces	500 grammes
Alcohol (90 per cent.)	4½ fl. ounces	225 cubic centimetres
Distilled Water	20 fl. ounces	1000 cubic centimetres
	or a sufficient quantity	

Macerate the Tinospora for twenty-four hours with ten fluid ounces (or five hundred cubic centimetres) of Distilled Water; press strongly; again macerate the residue for twenty-four hours with ten fluid ounces (or five hundred cubic centimetres) of Distilled Water; press strongly. Mix the expressed liquids, and heat for five minutes to 180° F. (82·2° C.). To the resulting liquid, when cold, add the Alcohol; set aside; decant or filter, adding Distilled Water, if necessary, so as to produce one pint (or one thousand cubic centimetres) of the Concentrated Solution.

Dose.—½ to 1 fluid drachm.

India. Eastern Colonies.

LIQUOR TODDALIÆ CONCENTRATUS.

Concentrated Solution of Toddalia.

	IMPERIAL	METRIC
Toddalia, in No. 40 powder	10 ounces	500 grammes
Alcohol (20 per cent.)	25 fl. ounces	1250 cubic centimetres
	or a sufficient quantity	

Moisten the Toddalia with five fluid ounces (or two hundred and fifty cubic centimetres) of the Alcohol; pack in a closed percolator; set aside for three days; percolate with more of the Alcohol, added in ten portions of two fluid ounces (or one hundred cubic centimetres) each, at intervals of twelve hours; continue the percolation, with more Alcohol if necessary, until the resulting product measures one pint (or one thousand cubic centimetres).

Dose.—$\frac{1}{2}$ to 1 fluid drachm.

INDIA. EASTERN COLONIES.

MUCILAGO GUMMI INDICI.

Mucilage of Indian Gum.

	IMPERIAL	METRIC
Indian Gum, in small pieces .	2 ounces .	50 grammes
Distilled Water . . .	a sufficient quantity	

Rapidly rinse the Indian Gum with a little Distilled Water; then dissolve it in six fluid ounces (or one hundred and fifty cubic centimetres) of Distilled Water in a closed vessel, and strain.

In the under-mentioned divisions of the Empire, Mucilage of Indian Gum may be employed in making the official preparations for which Mucilage of Gum Acacia is directed to be used (see 'Gummi Indicum').

INDIA. EASTERN COLONIES.

MYLABRIS.

Mylabris.

The dried beetle Mylabris phalerata, *Pallas* [*Brandt and Ratz., Med. Zool.* vol. ii. plate xviii. fig. 18].

Characters.—Usually an inch (twenty-five millimetres) or rather more long, and three-eighths of an inch (nine millimetres) broad; with two long elytra, each three times as long as broad, black with two broad wavy transverse orange-coloured bands and a large orange-coloured spot at the base of each; one pair of brown membranous wings. Odour somewhat disagreeable.

In the under-mentioned divisions of the Empire, other species of the genus Mylabris may be employed in making the official preparations for which Mylabris is directed to be used, provided they yield a proportion of cantharidin equivalent to that contained in Mylabris phalerata, *Pallas*.

India. African Colonies. Eastern Colonies.

MYROBALANUM.

Myrobalans.

The dried immature fruits of Terminalia Chebula, *Retz.* [*Roxb., Coroman. Pl.* plate 197], usually distinguished in commerce as Chebulic myrobalans.

Characters.—Ovoid or fusiform fruits from one-third to three-quarters of an inch (eight to eighteen millimetres) or more in length, and of about three-eighths of an inch (nine millimetres) in width; strongly shrivelled longitudinally, black, solid, brittle, having a somewhat shining fracture, the interior being a little paler than the exterior. No odour; taste very astringent.

Dose, in powder.—$\frac{1}{2}$ to 1 drachm.

India. Eastern Colonies.

OLEUM AJOWAN.

Ajowan Oil.

Synonym.—Ptychotis Oil.

The oil distilled from the fruit of Carum copticum, *Benth. and Hook. f.* [*Bentl. and Trim., Med. Pl.* vol. ii. plate 120].

Characters.—Colourless, with an odour and taste resembling thyme. Specific gravity 0·917 to 0·930. It rotates the plane of a ray of polarised light from 1·0° to 1·5° to the right in a tube 100 millimetres long. If a portion of the Oil be cooled to 32° F. (0° C.), it should yield from 30 to 36 per cent. of crystalline Thymol.

Dose.—$\frac{1}{2}$ to 3 minims.

India. Eastern Colonies.

OLEUM ARACHIS.

Arachis Oil.

Synonyms.—Earth-nut Oil, Ground-nut Oil, Pea-nut Oil.

The oil expressed, without the aid of heat, from the seeds of Arachis hypogæa, *Linn.* [*Bentl. and Trim., Med. Pl.* vol. ii. plate 75].

Characters.—Pale yellow or greenish-yellow in colour, with a faint nut-like odour and a bland nutty taste. Specific gravity 0·916 to 0·918. It becomes turbid at 37·4° F. (3° C.) and solidifies at 23° F. (—5° C.). On exposure to the air it very slowly thickens and becomes rancid.

In the under-mentioned divisions of the Empire, Arachis Oil may be employed in making the official Liniments, Ointments, and Plasters for which Olive Oil is directed to be used.

India. African Colonies. Eastern Colonies. Australasian Colonies.

OLEUM GAULTHERIÆ.

Oil of Gaultheria.

Synonym.—Oil of Wintergreen.

The oil distilled from the leaves of Gaultheria procumbens, *Linn.* [*Bentl. and Trim., Med. Pl.* vol. iii. plate 164] or from the bark of the sweet-birch, Betula lenta, *Linn.* [*Sargent, Silva*, vol. ix. plate 448]; it contains at least 90 per cent., but generally a much larger proportion, of natural methyl salicylate, associated with small quantities of other organic compounds.

Characters and Tests.—Colourless or slightly yellowish in tint; odour strong and characteristic; taste warm, sweetish, and aromatic; reaction slightly acid. Specific gravity 1·176 to 1·187. It is readily soluble in *alcohol* (90 per cent.). Optically it is either inactive or does not rotate the plane of a ray of polarised light more than 1·0° to the left in a tube 100 millimetres long.

Dose.—3 to 10 minims.

North American Colonies.

OLEUM GRAMINIS CITRATI.

Oil of Lemon Grass.

Synonym.—Indian Oil of Verbena.

The oil distilled from Andropogon citratus, *DC.* (Andropogon Schœnanthus, *Wall.*) [*Wallich, Plant. Asiat Rar.* plate 280].

Character and Test.—A dark yellow oil having an odour resembling that of verbena. Specific gravity 0·895 to 0·905. It should not rotate the plane of a ray of polarised light more than 3° in either direction in a tube 100 millimetres long. Soluble in *alcohol* (70 per cent.). If 10 cubic centimetres be well shaken with 50 cubic centimetres of a boiling 30 per cent. solution of *sodium hydrogen sulphite*, an oily layer separates, which, when cooled to 60° F. (15·5° C.), should not measure more than 3·5 cubic centimetres (absence of more than 35 per cent. of constituents other than aldehydes).

Dose.—$\frac{1}{2}$ to 3 minims.

INDIA. EASTERN COLONIES. WEST INDIAN COLONIES.

OLEUM GYNOCARDIÆ.

Gynocardia Oil.

Synonym.—Chaulmoogra Oil.

The fatty oil expressed from the seeds of Gynocardia odorata, *R. Br.* [*Bentl. and Trim., Med. Pl.* vol. i. plate 28], or of Gynocardia Prainii, *Desp.*

Characters and Test.—A brownish-yellow oil or fat of varying consistence, with a characteristic odour and a somewhat acrid taste. It may fully liquefy only at 107·6° F. (42° C.), resolidifying in different periods and at different temperatures down to 60° F. (15·5° C.). It has an acid reaction. Specific gravity not constant, but usually from 0·930 to 0·954 at 86° to 104° F. (30° to 40° C.). Cold *alcohol* (90 per cent.) dissolves the greater part of the Oil, repeated treatment with warm *alcohol* (90 per cent.) dissolving the remainder. It is soluble also in *purified ether*, *chloroform*, and *carbon bisulphide*. It may contain a little non-fatty matter not taken up by these solvents and causing turbidity of the solutions. A mixture of twenty drops with one drop of *sulphuric acid* in a watch-glass acquires a reddish-brown coloration changing to olive-green.

Dose.—5 to 10 minims, gradually increased to from ½ to 1 fluid drachm.

India. Eastern Colonies.

OLEUM SESAMI.

Sesame Oil.

The oil expressed from the seeds of Sesamum indicum, *Linn.* [*Bentl. and Trim., Med. Pl.* vol. iii. plate 198].

Characters and Test.—A limpid oil of a pale yellow colour, with a faint odour and a bland taste. Specific gravity 0·921 to 0·924. It congeals at a temperature of 23° F. (−5° C.). If 10 cubic centimetres be treated with 10 cubic centimetres of *hydrochloric acid* containing 0·6 gramme of *pyrogallol*, and the mixture be shaken vigorously and then set aside for one minute, two layers will be formed. The upper oily layer is to be carefully removed by means of a pipette; the lower acid layer is to be boiled for five minutes, when it will gradually assume a colour which is purple by transmitted light and blue by reflected light.

In the under-mentioned divisions of the Empire, Sesame Oil may be employed in making the official Liniments, Ointments, and Plasters for which Olive Oil is directed to be used.

India. African Colonies. Eastern Colonies. North American Colonies.

OLIVERI CORTEX.

Oliver Bark.

Synonym.—Black Sassafras.

The dried bark of Cinnamomum Oliveri, *Bailey* [*Proc. Linn. Soc. of New South Wales*, July 28, 1897, part 2]

Characters.—In flat pieces usually about eight inches (two decimetres) in length, and one and a half inches (thirty-seven millimetres) in width. It is covered with a coarsely granular periderm of a deep orange-brown colour marbled with patches of a yellowish-brown hue; the tissues beneath

the periderm are of a deep umber-brown colour. The inside of the bark is of an umber-brown colour, and has a close satin-like surface marked with very fine striæ. It has a close fracture, slightly fibrous in the liber portion. Odour aromatic and spicy, recalling sassafras and camphor; taste agreeably spicy and camphoraceous.

Australasian Colonies.

OXYMEL URGINEÆ.

Oxymel of Urginea.

	IMPERIAL	METRIC
Urginea, bruised .	2½ ounces . .	75 grammes
Acetic Acid . .	2½ fl. ounces . .	75 cubic centimetres
Distilled Water .	8 fl. ounces . .	240 cubic centimetres
Clarified Honey, liquefied .	a sufficient quantity	

Digest the Urginea for seven days in a mixture of the Acetic Acid and Distilled Water. Press strongly; filter. Mix the filtrate, which should measure approximately ten fluid ounces (or three hundred cubic centimetres), with about twenty-seven fluid ounces (or eight hundred and ten cubic centimetres) of the Clarified Honey, or sufficient to produce Oxymel of Urginea having the specific gravity 1·320.

Dose.—½ to 1 fluid drachm.

India. Eastern Colonies.

PICRORHIZA.

Picrorhiza.

The dried rhizome of Picrorhiza Kurroa, *Royle* [*Royle, Ill.* plate 71].

Characters.—Generally about the size of a goose-quill, but often no larger than a crow-quill, the lower portion covered by a shrivelled, greyish-brown, corky bark, and marked by prominent scars, the remains of rootlets; towards the upper end it becomes larger (a quarter of an inch—or six millimetres—in diameter), is thickly set with dark greyish-brown scales so disposed as to form partial annulations, and terminates in a scaly leaf-bud or stem. The rhizome is generally broken into short pieces, from one to two inches (two and a half to five centimetres) long; the fracture is short, the root very fragile and light, and black internally with a very narrow imperfect ring of paler coloured xylem; it has no odour, and has a very bitter taste.

Dose, in powder.—10 to 20 grains, as a tonic; as an antiperiodic, 40 to 50 grains.

INDIA. EASTERN COLONIES.

PILULA IPECACUANHÆ CUM URGINEA.

Pill of Ipecacuanha with Urginea.

	IMPERIAL	METRIC
Compound Powder of Ipecacuanha	3 ounces	30 grammes
Urginea, dried and in powder	1 ounce	10 grammes
Ammoniacum, in powder	1 ounce	10 grammes
Syrup of Glucose	a sufficient quantity	

Mix to form a mass.

Dose.—4 to 8 grains.

This Pill contains about 5 per cent. of Opium.

INDIA. EASTERN COLONIES.

PILULA URGINEÆ COMPOSITA.

Compound Urginea Pill.

	IMPERIAL	METRIC
Urginea, dried and in powder	1¼ ounces	25 grammes
Ginger, in powder	1 ounce	20 grammes
Ammoniacum, in powder	1 ounce	20 grammes
Hard Soap, in powder	1 ounce	20 grammes
Syrup of Glucose	1 ounce or a sufficient quantity	20 grammes

Mix to form a mass.

Dose.—4 to 8 grains.

INDIA. EASTERN COLONIES.

PODOPHYLLI INDICI RESINA.

Indian Podophyllum Resin.

A powdered resin prepared from Indian Podophyllum Rhizome by the process described on pages 257 and 258 of the British Pharmacopœia 1898 for the preparation of Podophyllum Resin from Podophyllum Rhizome, and possessing similar characters.

Dose.—¼ to 1 grain.

INDIA. EASTERN COLONIES.

PODOPHYLLI INDICI RHIZOMA.

Indian Podophyllum Rhizome.

The dried rhizome and roots of Podophyllum Emodi, *Wall.* [*Flore des Serres et des Jardins de l'Europe*, plates 1659, 1660.]

Characters.—The Rhizome is horizontal, more or less cylindrical, and contorted. It is from a quarter to a third of an inch (six to eight millimetres) in thickness, crowded above with tuberosities, marked by depressed oval or circular scars, and giving off numerous simple rootlets from the whole of the under surface. The terminal bud is enclosed in whitish papery sheaths. The colour is earthy-brown. The fracture is white, short, and mealy, or yellow and horny, exhibiting a circular arrangement of yellow vascular bundles, and bounded on the outside by a thin brown cortical layer. It has a very faint odour and a bitter acrid taste.

INDIA. EASTERN COLONIES.

PULVIS BUTEÆ SEMINUM.

Powder of Butea Seeds.

Soak Butea Seeds in Water; carefully remove the integuments; then dry the kernels and reduce them to powder.

Dose.—10 to 20 grains.

INDIA. EASTERN COLONIES.

PULVIS KALADANÆ COMPOSITUS.

Compound Powder of Kaladana.

	IMPERIAL	METRIC
Kaladana, in powder	5 ounces	100 grammes
Acid Potassium Tartrate, in powder	9 ounces	180 grammes
Ginger, in powder	1 ounce	20 grammes

Mix.

Dose.—20 to 60 grains.

India. Eastern Colonies.

SAPPAN.

Sappan.

The heart-wood of Cæsalpinia Sappan, *Linn.* [*Roxburgh, Coroman. Pl.* plate 16].

Characters and Test.—In hard, heavy sections of variable size, or in the form of chips, of a fine orange-red colour. A transverse section exhibits well-marked concentric rings, numerous narrow medullary rays, and large vessels which are readily seen with a lens. It is cut with difficulty transversely, but is easily split longitudinally, showing distinctly the grain due to the medullary rays. The wood has no odour, and only a slightly astringent taste. It communicates a red colour to *alcohol* (90 per cent.) and to *water*; this colour becomes a carmine-red, and not purple, upon the addition of *solution of potassium hydroxide* (distinction from Logwood).

India. Eastern Colonies.

SUCCUS ACALYPHÆ.

Juice of Acalypha.

Bruise fresh Acalypha; press out the juice; to every three volumes of juice add enough Alcohol (90 per cent.)

to produce, after admixture, four volumes; set aside for seven days; filter.

Dose.—1 to 4 fluid drachms.

India. Eastern Colonies.

SUCCUS ADHATODÆ.

Juice of Adhatoda.

The freshly expressed and strained juice of the bruised fresh leaves of Adhatoda Vasica, *Nees* (Justicia Adhatoda, *Linn.*).

Dose.—1 to 4 fluid drachms.

India. Eastern Colonies.

SYRUPUS URGINEÆ.

Syrup of Urginea.

	IMPERIAL	METRIC
Vinegar of Urginea	1 pint	500 cubic centimetres
Refined Sugar	38 ounces	950 grammes

Dissolve the Refined Sugar in the Vinegar of Urginea by the aid of gentle heat. The product should weigh three pounds ten ounces.

Dose.—$\frac{1}{2}$ to 1 fluid drachm.

India. Eastern Colonies.

TINCTURA ADHATODÆ.

Tincture of Adhatoda.

	IMPERIAL	METRIC
Adhatoda, dried and in No. 40 powder	$2\frac{1}{2}$ ounces	125 grammes
Alcohol (60 per cent.)	a sufficient quantity	

Moisten the powder with two fluid ounces (or one hundred cubic centimetres) of the Alcohol, and complete the percolation process. The resulting Tincture should measure one pint (or one thousand cubic centimetres).

Dose.—$\frac{1}{2}$ to 1 fluid drachm.

India. Eastern Colonies.

TINCTURA ALSTONIÆ.

Tincture of Alstonia.

	IMPERIAL	METRIC
Alstonia, in No. 20 powder	2½ ounces	125 grammes
Alcohol (60 per cent.)	1 pint	1000 cubic centimetres

Prepare by the maceration process.

Dose.—½ to 1 fluid drachm.

India. Australasian Colonies. Eastern Colonies.

TINCTURA ANDROGRAPHIDIS.

Tincture of Andrographis.

	IMPERIAL	METRIC
Andrographis, in No. 40 powder	2 ounces	100 grammes
Alcohol (60 per cent.)	a sufficient quantity	

Moisten the powder with two fluid ounces (or one hundred cubic centimetres) of the Alcohol, and complete the percolation process. The resulting Tincture should measure one pint (or one thousand cubic centimetres).

Dose.—½ to 1 fluid drachm.

India. Eastern Colonies.

TINCTURA ARISTOLOCHIÆ.

Tincture of Aristolochia.

	IMPERIAL	METRIC
Aristolochia, in No. 40 powder	4 ounces	200 grammes
Alcohol (70 per cent.)	a sufficient quantity	

Add to the Aristolochia four fluid ounces (or two hundred cubic centimetres) of the Alcohol, and complete the percolation process. The resulting Tincture should measure one pint (or one thousand cubic centimetres).

Dose.—½ to 1 fluid drachm.

India. Eastern Colonies.

TINCTURA ARNICÆ FLORUM.

Tincture of Arnica Flowers.

	IMPERIAL	METRIC
Arnica Flowers, in No. 20 powder	2 ounces	100 grammes
Alcohol (45 per cent.)	a sufficient quantity	

Moisten the powder with four fluid ounces (or two hundred cubic centimetres) of the Alcohol, and complete the percolation process. The resulting Tincture should measure one pint (or one thousand cubic centimetres).

Dose.—½ to 1 fluid drachm.

North American Colonies.

TINCTURA AZADIRACHTÆ INDICÆ.

Tincture of Indian Azadirach.

	IMPERIAL	METRIC
Indian Azadirach, rasped	2 ounces	100 grammes
Alcohol (45 per cent.)	1 pint	1000 cubic centimetres

Prepare by the maceration process.

Dose.—½ to 1 fluid drachm.

India. Eastern Colonies.

TINCTURA BERBERIDIS.

Tincture of Berberis.

	IMPERIAL	METRIC
Berberis, in No. 60 powder	2 ounces	100 grammes
Alcohol (60 per cent.)	a sufficient quantity	

Add to the powder two fluid ounces (or one hundred cubic centimetres) of the Alcohol, and complete the percolation process. The resulting Tincture should measure one pint (or one thousand cubic centimetres).

Dose.—½ to 1 fluid drachm.

India. Eastern Colonies.

TINCTURA CALOTROPIS.

Tincture of Calotropis.

	IMPERIAL	METRIC
Calotropis, in No. 40 powder	2 ounces	100 grammes
Alcohol (60 per cent.)	a sufficient quantity	

Moisten the powder with one fluid ounce (or fifty cubic centimetres) of the Alcohol, and complete the percolation process. The resulting Tincture should measure one pint (or one thousand cubic centimetres).

Dose.—½ to 1 fluid drachm.

India. Eastern Colonies.

TINCTURA COSCINII.

Tincture of Coscinium.

	IMPERIAL	METRIC
Coscinium, in No. 20 powder	2 ounces	100 grammes
Alcohol (60 per cent.)	1 pint	1000 cubic centimetres

Prepare by the maceration process.

Dose.—½ to 1 fluid drachm.

India. Eastern Colonies.

TINCTURA DATURÆ SEMINUM.

Tincture of Datura Seeds.

	IMPERIAL	METRIC
Datura Seeds, bruised	5 ounces	250 grammes
Alcohol (70 per cent.)	a sufficient quantity	

Add to the bruised Datura Seeds four fluid ounces (or two hundred cubic centimetres) of the Alcohol, and complete the percolation process. The resulting Tincture should measure one pint (or one thousand cubic centimetres).

Dose.—5 to 15 minims.

India. Eastern Colonies.

TINCTURA JALAPÆ COMPOSITA.

Compound Tincture of Jalap.

	IMPERIAL	METRIC
Jalap, in No. 40 powder	1 oz., 262 grains	80 grammes
Scammony, in No. 40 powder	175 grains	20 grammes
Turpeth, in No. 40 powder	88 grains	10 grammes
Alcohol (60 per cent.)	a sufficient quantity	

Moisten the mixed powders with two fluid ounces (or one hundred cubic centimetres) of the Alcohol, and complete the percolation process. The resulting Tincture should measure one pint (or one thousand cubic centimetres).

Dose.—½ to 1 fluid drachm.

INDIA. EASTERN COLONIES. NORTH AMERICAN COLONIES.

TINCTURA KALADANÆ.

Tincture of Kaladana.

	IMPERIAL	METRIC
Kaladana, in No. 40 powder	4 ounces	200 grammes
Alcohol (70 per cent.)	a sufficient quantity	

Moisten the powder with two fluid ounces (or one hundred cubic centimetres) of the Alcohol, and complete the percolation process. The resulting Tincture should measure one pint (or one thousand cubic centimetres).

Dose.—½ to 1 fluid drachm.

INDIA. EASTERN COLONIES.

TINCTURA OLIVERI CORTICIS.

Tincture of Oliver Bark.

	IMPERIAL	METRIC
Oliver Bark, in No. 40 powder	2 ounces	100 grammes
Alcohol (60 per cent.)	a sufficient quantity	

Moisten the powder with one fluid ounce (or fifty cubic centimetres) of the Alcohol, and complete the percolation process. The resulting Tincture should measure one pint (or one thousand cubic centimetres).

Dose.—½ to 1 fluid drachm.

Australasian Colonies.

TINCTURA PICRORHIZÆ.
Tincture of Picrorhiza.

	IMPERIAL	METRIC
Picrorhiza, cut small and well bruised .	2½ ounces	125 grammes
Alcohol (45 per cent.) .	1 pint .	1000 cubic centimetres

Prepare by the maceration process.

Dose.—½ to 1 fluid drachm.

India. Eastern Colonies.

TINCTURA PODOPHYLLI INDICI.
Tincture of Indian Podophyllum.

	IMPERIAL	METRIC
Indian Podophyllum Resin	320 grains	36·5 grammes
Alcohol (90 per cent.) .	a sufficient quantity	

Add the Indian Podophyllum Resin to eighteen fluid ounces (or nine hundred cubic centimetres) of the Alcohol, and set aside for twenty-four hours, occasionally agitating; filter; pass enough of the Alcohol through the filter to produce one pint (or one thousand cubic centimetres) of the Tincture.

Dose.—5 to 15 minims.

India. Eastern Colonies.

TINCTURA TINOSPORÆ.
Tincture of Tinospora.

	IMPERIAL	METRIC
Tinospora, in No. 20 powder . . .	4 ounces	200 grammes
Alcohol (60 per cent.)	1 pint .	1000 cubic centimetres

Prepare by the maceration process.

Dose.—½ to 1 fluid drachm.

INDIA. EASTERN COLONIES.

TINCTURA URGINEÆ.

Tincture of Urginea.

	IMPERIAL	METRIC
Urginea, bruised . .	4 ounces	200 grammes
Alcohol (60 per cent.) .	1 pint .	1000 cubic centimetres

Prepare by the maceration process.

Dose.—5 to 15 minims.

INDIA. EASTERN COLONIES.

TINCTURA VALERIANÆ INDICÆ AMMONIATA.

Ammoniated Tincture of Indian Valerian.

	IMPERIAL	METRIC
Indian Valerian, in No. 40 powder .	4 ounces .	200 grammes
Oil of Nutmeg . .	30 minims .	3·1 cubic centimetres
Oil of Lemon . .	20 minims .	2·1 cubic centimetres
Solution of Ammonia	2 fl. ounces .	100 cubic centimetres
Alcohol (60 per cent.)	18 fl. ounces .	900 cubic centimetres

Mix the liquid ingredients, and prepare by the maceration process.

Dose.—½ to 1 fluid drachm

INDIA. EASTERN COLONIES.

TINOSPORA.

Tinospora.

The dried stem of Tinospora cordifolia, *Miers* [*Bentl. and Trim., Med. Pl.* vol. i. plate 12], collected in the hot season.

Characters and Test.—In cylindrical straight or twisted pieces or in transverse sections, having a diameter of from a quarter of an inch to two inches (six to fifty millimetres), covered with a strongly shrunken bark with deep longitudinal furrows and bearing numerous round elevated scars. The bark is somewhat smooth and wax-like, and is of a greenish-brown or brown colour; it is easily separable from the very porous woody cylinder, which is of a pale yellowish-grey colour. The transverse section exhibits one loose ring of xylem bundles containing large vessels; the bundles are separated by distinct starchy medullary rays. The fracture is tough and fibrous. There is no marked odour; taste bitter. A cooled decoction gives with *solution of iodine* the characteristic reaction for starch.

India. Eastern Colonies.

TODDALIA.

Toddalia.

The dried root-bark of Toddalia aculeata, *Pers.* [*Bentl. and Trim., Med. Pl.* vol. i. plate 49].

Characters.—In quilled pieces having a thickness of from one-twelfth to one-ninth of an inch (two to three millimetres), covered with a soft yellowish periderm fissured longitudinally and exhibiting a subjacent bright yellow layer and a deeper brown layer. The transverse section shows an outer yellowish periderm, a narrow bright yellow intermediate layer, and an inner broad radiate layer of brown phloem in which are situated numerous oleo-resin receptacles. The inner surface of the bark is somewhat granular, and brown in colour. It has a short and close fracture, a faint aromatic odour, and an aromatic pungent bitter taste.

India. Eastern Colonies.

TURPETHUM.

Turpeth.

The dried root and stem of Ipomœa Turpethum, *R. Br.* [*Bot. Mag.* plate 2093].

Characters.—Turpeth, as found in commerce, consists of the root and stem of the plant cut into short lengths, usually from one half to two inches (one and a quarter to five centimetres) in diameter; the central woody portion is often removed by splitting the bark on one side. The exterior surface has a twisted rope-like or columnar appearance due to deep longitudinal furrows, and is of a dull grey colour; a transverse section shows a porous central column surrounded by a broad cortical portion, the section is of a pale yellowish-white colour, the cortex sometimes being darker. The fracture is short in the cortex and fibrous in the central portion. The drug has a faint odour and a nauseous taste, which is perceptible only after it has been some time in the mouth.

Dose, in powder.—5 to 20 grains.

INDIA. EASTERN COLONIES. NORTH AMERICAN COLONIES.

TYLOPHORÆ FOLIA.

Tylophora Leaves.

The dried leaves of Tylophora asthmatica, *Wight et Arnott* [*Bentl. and Trim., Med. Pl.* vol. iii. plate 177].

Characters.—Petiolate, entire, from two to five inches (five to twelve and a half centimetres) long and from three-quarters of an inch to two and a half inches (eighteen to sixty-five millimetres) broad, lanceolate-ovate or ovate or sub-rotund in outline, somewhat cordate at the base, abruptly acuminate; rather leathery in texture, glabrous on the upper surface and finely downy on the lower; brownish-green colour, which is paler on the lower surface. Odour slightly aromatic; almost devoid of taste.

Dose, in powder.—¼ to 2 grains, as an expectorant; as an emetic, 15 to 30 grains.

INDIA. EASTERN COLONIES.

UNGUENTUM GYNOCARDIÆ.

Gynocardia Ointment.

	IMPERIAL	METRIC
Gynocardia Oil	50 grains	30 grammes
Hard Paraffin	200 grains	120 grammes
Soft Paraffin, white	250 grains	150 grammes

Melt the Hard and Soft Paraffins together; add the Gynocardia Oil; stir until cold.

India. Eastern Colonies.

UNGUENTUM MYLABRIDIS.

Mylabris Ointment.

	IMPERIAL	METRIC
Mylabris, bruised	1 ounce	30 grammes
Benzoated Lard	10 ounces	300 grammes

Melt the Benzoated Lard, add the Mylabris, and digest at a temperature of about 120° F. (48·9° C.) for twelve hours. Strain through calico and press the residue gently; stir until cold.

See Appendix I., p. 57 (Adeps Induratus); p. 58 (Unguenta).

India. African Colonies. Eastern Colonies.

UNGUENTUM MYROBALANI.

Myrobalan Ointment.

	IMPERIAL	METRIC
Myrobalans, in very fine powder	1 ounce	30 grammes
Benzoated Lard	4 ounces	120 grammes

Mix by trituration.

See Appendix I., p. 57 (Adeps Induratus); p. 58 (Unguenta).

India. Eastern Colonies.

UNGUENTUM MYROBALANI CUM OPIO.

Myrobalan and Opium Ointment.

	IMPERIAL	METRIC
Myrobalan Ointment	. 925 grains	. 92·5 grammes
Opium, in very fine powder	75 grains	. 7·5 grammes

Mix by trituration.

See Appendix I., p. 57 (Adeps Induratus); p. 58 (Unguenta).

100 parts of this Ointment contain 7½ parts of Opium.

India. Eastern Colonies.

URGINEA.

Urginea.

Synonym.—Indian Squill.

The younger bulbs of Urginea indica, *Kunth* [*Wight, Icones*, plate 2063], also the younger bulbs of Scilla indica, *Baker* (Ledebouria hyacinthina, *Roth.*) [*Wight, Icones*, plate 2040]; taken soon after the plant has flowered.

Characters.—The bulbs of Urginea indica, *Kunth*, are tunicated, consisting of fleshy coats which enclose each other completely; in size varying as much as the common onion; colour whitish; taste bitter and acrid. The bulbs of Scilla indica, *Baker*, are not tunicated like an onion, but made up of thick fleshy imbricated scales; otherwise, except that they are somewhat smaller, they resemble those of Urginea indica, *Kunth*.

Both kinds of bulbs should be kept in a dry place.

India. Eastern Colonies.

VALERIANÆ INDICÆ RHIZOMA.

Indian Valerian Rhizome.

The dried rhizome and rootlets of Valeriana Wallichii, *DC.* [*Asiat. Research.* vol. ii. p. 405].

Characters.—The Rhizome is crooked, about two inches (five centimetres) long and from a quarter to half an inch (six to twelve millimetres) in diameter, of a dull brown colour, marked with transverse ridges, and thickly studded with circular prominent tubercles, to a few of which thick rootlets still remain attached. The crown is marked by a number of bracts; the lower end is blunt. The Rhizome is very hard and tough; the fractured surface is greenish-brown in colour. It has the odour characteristic of Valerian Rhizome.

INDIA. EASTERN COLONIES.

VIBURNUM.

Black Haw.

The dried bark of Viburnum prunifolium, *Linn.* [*Watson, Dendr. Brit.* plate 23].

Characters.—In thin pieces or narrow quills. The quills are glossy, purplish-brown in colour, with a few scattered warts and minute black dots. The thin, slightly curved, pieces from old wood are covered with a greyish or reddish-brown periderm which is frequently scaly and readily removed, displaying the reddish-brown or yellowish-red subjacent tissues. The inner surface has a pale reddish-yellow colour and is longitudinally striate. The bark has a short fracture, a faint odour, and a somewhat bitter taste.

INDIA. EASTERN COLONIES. NORTH AMERICAN COLONIES.

APPENDICES.

I.

ALTERNATIVE PREPARATIONS SANCTIONED FOR USE IN INDIA AND THE COLONIES.

ADEPS INDURATUS.—Lard deprived of a portion of its oil by pressure. Indurated Lard may be employed in India and the Colonies when prevailing high temperatures render the Lard of the Text of the Pharmacopœia or of the Addendum too soft for use in Ointments or Plasters.

AQUÆ OLEI ANETHI, ANISI, CARUI, CINNAMOMI, FŒNICULI, MENTHÆ PIPERITÆ, MENTHÆ VIRIDIS, PIMENTÆ.—Each of these Waters may be prepared by triturating the corresponding Oil with twice its weight of Calcium Phosphate and five hundred times its volume of Distilled Water and filtering the mixture. In India and other tropical countries these Waters may be used in place of the corresponding *Aquæ* of the Text of the Pharmacopœia.

EMPLASTRA.—In India and the Colonies, more or less Hard Soap, Indurated Lard, Resin, or Yellow Beeswax, may be employed in the preparation of the Plasters of the Text of the Pharmacopœia or of the Addendum, when prevailing high temperatures otherwise render the basis too soft for convenient use; but the official proportion of the active ingredient must in all cases be maintained.

EXTRACTA LIQUIDA.—Any Liquid Extract, defined in the Text of the Pharmacopœia or of the Addendum, containing less than one-fourth of its weight of Alcohol (90 per cent.), may have the proportion of Alcohol (90 per cent.) increased to an amount not exceeding one-fourth of the weight of the Extract, in India and other tropical countries where otherwise the preparation would be liable to ferment.

LIMONIS CORTEX SICCATUS.—In India and the Colonies, when fresh Lemon Peel cannot be obtained, Dried Lemon

Peel may be used in preparing Compound Infusion of Orange Peel, Compound Infusion of Gentian, Syrup of Lemon, and Tincture of Lemon.

Suppositoria.—More or less White Beeswax, according to prevailing temperatures, may be used in place of an equivalent amount of Oil of Theobroma in India and the Colonies, when otherwise the Suppositories of the Text of the Pharmacopœia would be too soft for convenient use.

Syrupus Rhœados.—In India and the Colonies, when prevailing high temperatures render this preparation liable to ferment, the proportion of Alcohol (90 per cent.) may be increased, but not to more than double the proportion stated in the Text of the Pharmacopœia, an equivalent quantity of Distilled Water being omitted.

Unguenta.—In India and the Colonies, more or less Indurated Lard, Prepared Suet, Yellow Beeswax, or White Beeswax, may be employed in the preparation of the Ointments of the Text of the Pharmacopœia or of the Addendum, when prevailing high temperatures otherwise render the basis too soft for convenient use; but the official proportion of the active ingredient must in all cases be maintained.

II.

ARTICLE EMPLOYED IN CHEMICAL TESTING.

PYROGALLOL.

Synonym.—Pyrogallic Acid.

The pure light feathery crystals, $C_6H_3(OH)_3$, of commerce.

III.

LIST OF BOOKS REFERRED TO, CONTAINING PLATES OF OFFICIAL PLANTS ETC.

⁂ *Books not given here will be found in the list contained in Appendix X. of the British Pharmacopœia* 1898.

Asiatick Researches. 20 vols. 8vo. Calcutta, 1788—1839.

Beddome, R. H., *Flora Sylvatica for Southern India.* 2 vols. 4to, 359 Pl. Madras, 1869—1873.

Berg und Schmidt, *Atlas der officinellen Pflanzen. Darstellung und Beschreibung der im Arzneibuche für das deutsche Reich erwähnten Gewächse.* 4to, 163 Pl. Leipzig, 1891—1900.

Botanical Register. 33 vols. 8vo., 2600 Pl. London, 1815—1847.

Burmann, N. L., *Flora Indica, cui accedit series Zoophytorum Indicorum, nec non prodromus floræ Capensis.* 4to, 67 Pl. Leyden, 1768.

Flore des Serres et des Jardins de l'Europe. 23 vols. 8vo. Ghent, 1845—1883.

Proceedings of the Linnean Society of New South Wales. 8vo. Sydney, 1876—1900.

Roxburgh, W., *Plants of the Coast of Coromandel.* 3 vols. atlas folio, 300 Pl. London, 1795—1819.

Royle, J. F., *Illustrations of the Botany and other branches of the Natural History of the Himalayan Mountains and of the Flora of Cashmere.* 2 vols. folio, 100 Pl. London, 1839.

Schmarda, L. K., *Neue wirbellose Thiere, beobachtet und gesammelt auf einer Reise um die Erde* 1853 *bis* 1857. 2 vols. 4to. Leipzig, 1859—1861.

United States Department of Agriculture—Report. Washington, 1888.

Wallich, N., *Plantæ Asiaticæ rariores.* 3 vols. folio, 300 Pl. London, 1830—1832.

Watson, P. W., *Dendrologia Britannica.* 2 vols. 8vo, 172 Pl. London, 1825.

Wight, R., *Icones Plantarum Indiæ Orientalis.* 6 vols. 4to, 2101 Pl. Madras, 1840—1853.

Wight, R., *Illustrations of Indian Botany.* 2 vols. 4to, 205 Pl. Madras, 1840—1850.

THE

BRITISH PHARMACOPŒIA

1898

FIRST ISSUE, APRIL 1898 SECOND ISSUE, OCTOBER 1898
THIRD ISSUE, FEBRUARY 1899

ALSO THE

INDIAN AND COLONIAL ADDENDUM

1900

PUBLISHED UNDER THE DIRECTION OF

THE GENERAL COUNCIL OF
MEDICAL EDUCATION AND REGISTRATION
OF THE UNITED KINGDOM

Price of the Pharmacopœia, 10s 6d

Price of the Addendum, 3s

Printed and published for the Medical Council
BY
SPOTTISWOODE & CO. LTD., GRACECHURCH STREET, LONDON, ENGLAND